

**CLAIMS:**

- [c1] 1. A handheld electronic device comprising:  
a housing;  
a plurality of input keys disposed around the housing locations where fingers will naturally land when the handheld device is being held in an average-sized hand; and  
a processing circuit within the housing and coupled to the plurality of keys, the processing circuit being responsive to actuation of a selected combination of at least one key by generating data representing a character.
- [c2] 2. A handheld device as claimed in claim 1, wherein the processing circuit comprises:  
an interface coupled to the plurality of keys for generating said data representing a character; and  
a processor for processing said data representing a character.
- [c3] 3. A handheld device as claimed in claim 2, wherein the processing circuit further comprises a store coupled to the processor for storing data for use by the processor.
- [c4] 4. A handheld device as claimed in claim 1, further comprising a display for displaying a representation of said character represented by the data generated by the processing circuit.
- [c5] 5. A handheld device as claimed in claim 1, wherein at least one of the plurality of keys comprises a plurality of buttons to enable more than two different states to be defined by the at least one key.
- [c6] 6. A handheld device as claimed in claim 1, wherein at least one of the plurality of keys comprises a rocker switch to enable more than two different states to be defined by the at least one key.

[c7] 7. A handheld device as claimed in claim 1, wherein at least one of the plurality of keys comprises a jog-shuttle button which enables more than two different states to be defined when at least one other key is actuated simultaneously therewith.

[c8] 8. A handheld device as claimed in claim 1, wherein the plurality of key comprises four keys positioned for actuation by a respective finger of a said average-sized hand, and a fifth key positioned for actuation by the thumb of a said average-sized hand.

[c9] 9. A handheld device as claimed in claim 2, wherein the interface comprises a lookup table defining a relationship between the generated data and the combinations of at least one key.

[c10] 10. A handheld device as claimed in claim 9, wherein the relationship is defined for characters in an alphabetical order.

[c11] 11. A handheld device as claimed in claim 9, wherein the relationship is defined for characters in a most frequently used letter order.

[c12] 12. A handheld electronic device comprising:  
a housing;  
a plurality of input keys disposed around the housing at locations where fingers will naturally land when the handheld device is being held in an average-sized hand;  
an interfacing and processing unit coupled to the plurality of keys and responsive to actuation of a selected combination of at least one key by generating data representing a character and processing said data; and  
a display for displaying a representation of said character represented by the data generated by the processing circuit, and wherein  
the processor is arranged to control the display to display an indication of characters that will be input if a combination of one or more input keys is actuated by the user.

[c13] 13. An apparatus for generating input data, the apparatus comprising:  
a housing;  
a display screen mounted to the housing;

a plurality of input keys proximate to the display screen and disposed around the housing at positions that facilitate respective actuation by and least some digits on a single hand;

a processor, coupled to the input keys and to the display screen, for generating data representing symbols for display on the display screen, which symbols identify combinations of at least one input key corresponding to respective characters from a character set, the processor responding to simultaneous actuation of an identified combination by generating digital data representing the corresponding character displayed on the display screen.

[c14] 14. An apparatus as claimed in claim 13, wherein:

the input keys comprise a jog key; and

the processor is arranged to generate data representing symbols identifying sub-sets of characters from the character set, and to respond to actuation of the jog key by outputting data so as to change the display screen from displaying symbols representing one sub-set of characters to displaying symbols representing another sub-set of characters.

[c15] 15. An apparatus as claimed in claim 14, wherein:

the processor is arranged to generate data representing symbols identifying sub-sets of characters which are displayed in an alphabetical order.

[c16] 16. An apparatus as claimed in claim 14, wherein:

the processor is arranged to generate data representing symbols identifying sub-sets of characters which are displayed in a most frequently used letter order.

[c17] 17. A data input device comprising:

a housing;

a plurality of user operable input means disposed about the housing;

data generating means for generating display data defining graphics identifying combinations of at least one of said user operable input means and a set of characters respectively associated with said combinations;

displaying means mounted to said housing and coupled to said processing means for displaying said graphics defined by said display data; and

generating means coupled to the plurality of user operable input means and responsive to actuation of a selected combination of at least one user operable input means by generating data representing the character identified by the displayed graphics.

[c18] 18. A data input device as claimed in claim 17, wherein the data generating means is responsive to manipulation of said user operable input means to generate data defining graphics for another set of characters respectively associated with said combinations.

[c19] 19. A data input device as claimed in claim 18, wherein the data generating means is arranged to generate data for characters which are displayed in an alphabetical order.

[c20] 20. A data input device as claimed in claim 18, wherein the data generating means is arranged to generate data for characters which are displayed in a most frequently used letter order.

[c21] 21. A data input device as claimed in claim 17, wherein:  
the plurality of user operable input means comprise a jog key; and  
the data generating means is arranged to generate data representing graphics identifying sub-sets of characters from a character set, and to respond to actuation of the jog key by outputting data so as to change the display screen from displaying graphics corresponding to one sub-set of characters to displaying graphics corresponding to another sub-set of characters.

[c22] 22. A method of generating input data using an input device in which a plurality of input keys are disposed around a display screen, the method comprising:  
generating display data defining graphics identifying combinations of at least one of said input keys and a set of characters respectively associated with said combinations;  
displaying said graphics defined by said display data; and  
responding to actuation of a selected combination of at least one user operable input means by generating data representing the character identified by the displayed graphics.

[c23] 23. A method as claimed in claim 22, further comprising responding to manipulation of said input keys by generating data defining graphics for another set of characters respectively associated with said combinations.

[c24] 24. A method as claimed in claim 22, wherein the display data is generated for characters which are displayed in an alphabetical order.

[c25] 25. A method as claimed in claim 22, wherein the display data is generated for characters which are displayed in a most frequently used letter order.

[c26] 26. A method as claimed in claim 22, further comprising:  
generating data representing graphics identifying sub-sets of characters from a character set; and

responding to manipulation of said input keys by outputting data so as to change the display screen from displaying graphics corresponding to one sub-set of characters to displaying graphics corresponding to another sub-set of characters.